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General IP (Singapore) Pte. Ltd.
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14 **UNITED STATES DISTRICT COURT**
15 **FOR THE NORTHERN DISTRICT OF CALIFORNIA**
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17 AVAGO TECHNOLOGIES GENERAL IP
(SINGAPORE) PTE. LTD.,

18 Plaintiff,

19 v.
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21 ASUSTEK COMPUTER INC. and ASUS
COMPUTER INTERNATIONAL,

22 Defendants.
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**COMPLAINT FOR PATENT
INFRINGEMENT**

DEMAND FOR JURY TRIAL

1 Plaintiff Avago Technologies General IP (Singapore) Pte. Ltd. (“Avago”) files this
2 Complaint for Patent Infringement relating to several U.S. patents as identified below
3 (collectively, the “Patents-in-Suit”) and alleges as follows:

4 **PARTIES**

5 1. Plaintiff Avago is a corporation with a tax registration number 2005-12430-D
6 formed under the laws of the country of Singapore with its principal places of business at 1320
7 Ridder Park Dr., San Jose, California 95131 and 1 Yishun Avenue 7, Singapore 768923.

8 2. Defendant ASUSTeK Computer Inc. (“ASUSTeK”) is a corporation formed under
9 the laws of Taiwan R.O.C., with its principal place of business at No. 15, Li-Te Road, Peitou,
10 Taipei, Taiwan R.O.C.

11 3. Defendant ASUS Computer International (“ACI”) is a corporation formed under the
12 laws of the State of California, with its principal place of business at 800 Corporate Way, Fremont,
13 California 94539. ACI is authorized to do business in the State of California and has been assigned
14 the Entity Number C1745899 by the California Secretary of State. ACI may be served with
15 process by serving its registered agent, CT Corporation System, located at 818 West Seventh St.
16 Ste. 930, Los Angeles, CA 90017.

17 4. ACI is a subsidiary of ASUSTeK. ACI and ASUSTeK (collectively, “ASUS”) acted
18 in concert with regard to the allegations set forth in this Complaint and, therefore, the conduct
19 described herein is fairly attributable to either or both entities.

20 **JURISDICTION AND VENUE**

21 5. Avago brings this civil action for patent infringement pursuant to the Patent Laws of
22 the United States, 35 U.S.C. § 1 *et. seq.*, including 35 U.S.C. §§ 271, 281-285. This Court has
23 subject matter jurisdiction over this action pursuant to 28 U.S.C. §§ 1331 and 1338.

24 6. Upon information and belief, ASUS transacts and conducts business in this District
25 and the State of California, and is subject to the personal jurisdiction of this Court. Upon
26 information and belief, ASUS has minimum contacts within the State of California and this District
27 and has purposefully availed itself of the privileges of conducting business in the State of California
28 and in this District by, *inter alia*, maintaining its regional headquarters in this District. Avago’s

1 causes of action arise directly from ASUS's business contacts and other activities in the State of
2 California and in this District.

3 7. Upon information and belief, ASUS has committed acts of infringement, both
4 directly and indirectly, within this District and the State of California by, *inter alia*, selling, offering
5 for sale, importing, advertising, and/or promoting products that infringe one or more claims of the
6 Patents-in-Suit. More specifically, ASUS, directly and/or through intermediaries, uses, sells, ships,
7 distributes, offers for sale, advertises and otherwise promotes its products in the United States, the
8 State of California, and this District.

9 8. Upon information and belief, ASUS solicits customers in the State of California and
10 this District, and has many customers who are residents of the State of California and this District
11 and who use ASUS's products in the State of California and in this District.

12 9. Venue is proper in this district under 28 U.S.C. §§ 1391 and 1400(b).

13 **THE PATENTS-IN-SUIT**

14 10. On September 23, 1997, the United States Patent and Trademark Office ("USPTO")
15 duly and legally issued U.S. Patent No. 5,670,730, titled "Data Protocol and Method for
16 Segmenting Memory for a Music Chip," to inventors Anthony James Grewe and Kevin Alan Shelby
17 (the "'730 Patent"). A true and correct copy of the '730 Patent is attached as **Exhibit A** to this
18 Complaint.

19 11. On February 9, 1999, the USPTO duly and legally issued U.S. Patent No. 5,870,087,
20 titled "MPEG Decoder System and Method Having a Unified Memory for Transport Decode and
21 System Controller Functions," to Kwok Kit Chau (the "'087 Patent"). A true and correct copy of
22 the '087 Patent is attached as **Exhibit B** to this Complaint.

23 12. On February 13, 2001, the USPTO duly and legally issued U.S. Patent No.
24 6,188,835, titled "Optical Disk System and Method for Storing Data Allowing Playback of Selected
25 Portions of Recorded Presentations," to Brett J. Grandbois (the "'835 Patent"). A true and correct
26 copy of the '835 Patent is attached as **Exhibit C** to this Complaint.

27 13. On August 6, 2002, the USPTO duly and legally issued U.S. Patent No. 6,430,148,
28 titled "Multidirectional Communication Systems," to Steven Richard Ring (the "'148 Patent"). A

true and correct copy of the '148 Patent is attached as **Exhibit D** to this Complaint.

14. On January 3, 2006, the USPTO duly and legally issued U.S. Patent No. 6,982,663, titled "Method and System for Symbol Binarization," to Lowell Winger (the "'663 Patent"). A true and correct copy of the '663 Patent is attached as **Exhibit E** to this Complaint.

15. On June 1, 2004, the USPTO duly and legally issued U.S. Patent No. 6,744,387, titled "Method and System for Symbol Binarization," to Lowell Winger (the "'387 Patent"). A true and correct copy of the '387 Patent is attached as **Exhibit F** to this Complaint.

16. On November 9, 1999, the USPTO duly and legally issued U.S. Patent No. 5,982,830, titled "Hysteretic Synchronization System For MPEG Audio Frame Decoder," to Greg Maturi and Gregg Dierke (the "'830 Patent"). A true and correct copy of the '830 Patent is attached as **Exhibit G** to this Complaint.

17. On March 10, 2015, the USPTO issued a Certificate of Correction for the '387 Patent. A true and correct copy of the Certificate of Correction for the '387 Patent is attached as **Exhibit H** to this complaint.

18. By assignment, Avago owns all right, title, and interest in and to the Patents-in-Suit, including but not limited to the right to enforce the Patents-in-Suit and collect damages for past and future infringements.

19. The products accused of infringement in this Complaint do not include those products identified as infringing in the preliminary infringement contentions served by Plaintiffs on June 15, 2015, in the case now styled as *Avago Technologies General IP (Singapore) PTE. Ltd. v. Asustek Computer Inc. and Asus Computer International*, Civil Action No. 3:15-cv-4525-EMC ("ASUS I").

COUNT 1 **(Infringement of U.S. Patent No. 5,670,730)**

20. Avago incorporates by reference each and every allegation in the preceding paragraphs.

21. ASUS is making, using, offering to sell, selling and/or importing into the United States products that are adapted to or capable of storing digital audio files (*e.g.*, MP3, etc.) on an

integrated circuit chip(s) (*e.g.*, solid-state hard drives, eMMC memory, Flash memory, etc.), including but not limited to ASUS Model Nos. A4310, A8N, A9T, ASUSPRO Advanced B43E, ASUSPRO Advanced B53E, ASUSPRO Essential PU500C, Eee Pad Transformer Prime (TF201), Eee PC 1000, Eee PC 1000HG, EEE PC 1016PT, Eee PC 2G Surf, Eee PC 4G, Eee PC 701, Eee PC 701SD, Eee PC 900, Eee PC 900A, Eee PC 900HD, Eee PC S101, Eee PC T91, Eee PC T91MT, Eee Slate EP121, EeeBox PC EB1035, ET1010IUKI, ET1620IUTT, ET2012EUKS, ET2012EUTS, ET2012I, ET2013I, ET2020A, ET2020AUKK, ET2020IUTI, ET2220I, ET2220IUKI, ET2220IUTI, ET2221AUKR, ET2221AUTR, ET2230IUT, ET2311IUTH, ET2321INTH, ET2321IUTH, ET2323IUT, F3K, F553M, Fonepad 7 (FE170CG), Fonepad 7 (FE375CG), Fonepad 7 (ME372CG), Fonepad ME371MG, G46VW, G550J, G55VW, G56JR, G750JH, G750JS, G75VX, L3000 series, M2000 series, N10J, N43J, N52D, N550LF, N70S, N71Ja, N750J, N76VM, N80VB, PRO5DI, Q400A, Q551L, R501V, R505C, R556L, R751J, ROG CG8480, ROG CG8565, ROG TYTAN G30AB, S121, S405C, S46C, S56C, S6F, TAICHI 21, TAICHI 31, Transformer Book Flip TP550L, Transformer Book H100TA, Transformer Book T300L, Transformer Book Trio TX201L, Transformer Book TX300C, Transformer Book TX300CA, Transformer Pad TF0310C, Transformer Pad TF103CX, U1F, U20A, U24E, U2E Bamboo, U30J, U30S, U31F, U31J, U31S, U32U, U33J, U35F, U35J, U36J, U36S, U38D, U3S, U41J, U43F, U43J, U45J, U46E, U46S, U47A, U47VC, U50A, U50F, U50V, U52F, U53F, U53J, U56E, U57A, U6E, U6S, U6V, U80A, U80V, U81A, UL20A, UL20FT, UL30A, UL30J, UL30V, UL50A, UL50AG, UL50V, UL80A, UL80J, UL80V, UX50V, UX30, UX30S, UX51VZ, V1J, V1S, V2JE, V301L, V500C, Vivobook F200CA, VivoBook Q301L, VivoBook S200E, VivoBook S300C, VivoBook S301LA, VivoBook S400C, VivoBook S451L, VivoBook S550CM, VivoBook S551LB, VivoBook V400C, VivoBook V451L, VivoBook V551L, VivoBook X202E, W2J, W2P, W5F, W7J, W7S, W7SG, W90VP, X200CA, X200LA, X200M, X201E, X301A, X401A, X401U, X43E, X43U, X44H, X44L, X450C, X450VC, X45A, X45U, X501A, X501U, X502CA, X51L, X51R, X51RL, X52F, X52J, X52N, X53E, X53S, X53U, X53Z, X54C, X54H, X54L, X550C, X550DP, X550EA, X550J, X550LB, X550LD, X550VL, X551CA, X552L, X553M, X55A, X55C, X55U, X59GL, X59SR, X71Q, X71SL, X71V, X72D, X72F, X73E, X73S, X750L, X751L, X755JA, X75A, X75V, X83V, Z33,

1 Z35F, Z54C, Z71V, Z81, Z9000, Z91E, Z94L-2B, BU400A, C100PA, C201, ET2020IUKI,
 2 G752VL, GL771, P2420LA, P2420LJ, P2420SA, P2420SJ, P2520LA, P2520LJ ,P2520SJ, ROG
 3 GR6, TP200SA, UX303LB, UX303UA, VivoPC VM42, VivoPC VM62, VivoPC VM62B, VivoPC
 4 VM62N, VivoTab RT, Z170C, Z300C, Z380CX, Z580C, Z580CA, Zenbook UX21A, Zenbook
 5 UX21E, Zenbook UX302L, Zenbook UX31E, Zenbook UX31L, and ZenBook UX51V, that
 6 infringe at least Claim 1 of the '730 Patent.

7 22. Upon information and belief, the accused products, including but not limited to those
 8 identified in the preceding paragraph, are configured and/or adapted to decode digital music and/or
 9 audio and store audio data in designated locations in memory (*e.g.*, an integrated circuit chip).
 10 Upon information and belief, these accused products use and store a data format for use in an audio
 11 system wherein pre-recorded music is digitally encoded in memory of an integrated circuit music
 12 chip. This music is then decoded and reproduced by means of an associated audio player using a
 13 data format for storing information pertaining to the contents of the music chip. Furthermore, the
 14 individual tracks of audio are stored in designated locations in the music chip. Upon information
 15 and belief, these accused products use a data format which has a first header having parameters
 16 stored therein for use by the accused products to decode the digitally encoded music stored in the
 17 above referenced memory. Upon information and belief, these accused products use a data format
 18 which has at least one second header which includes selectable categorical information relating to
 19 the individual tracks of audio stored in the above referenced memory.

20 23. Upon information and belief, ASUS had actual knowledge of the '730 Patent at least
 21 as early as August 4, 2010, and at least since that date has had actual knowledge that one or more of
 22 its products infringes one or more claims of the '730 Patent.

23 24. On information and belief, Defendants have induced and will continue to induce the
 24 infringement of at least one claim of the '730 patent, in violation of 35 U.S.C. § 271(b), by, among
 25 other things, actively and knowingly aiding and abetting others (including Defendants' customers
 26 and end users) through activities such as marketing ASUS products, creating and/or distributing
 27 data sheets, application notes, and/or similar materials with instructions on using ASUS products,
 28 with the specific intent to induce others to directly make, use, offer for sale, sell, and/or import into

1 the United States, without license or authority from Plaintiff, ASUS products that fall within the
2 scope of the '730 patent. On information and belief, Defendants know that the induced acts
3 constitute infringement of the '730 patent.

4 25. On information and belief, Defendants' past and continuing infringement has been
5 deliberate and willful, and this case is therefore an exceptional case, which warrants an award of
6 treble damages and attorneys' fees to Plaintiffs pursuant to 35 U.S.C. § 285. On information and
7 belief, Defendants have known that their products practice one or more claims of the '730 Patent
8 since August 4, 2010, at the latest. Defendants have continued to make, use, sell, offer for sale,
9 and/or import infringing products into the United States despite knowing that there was an
10 objectively high likelihood of infringement of the '730 Patent. To the extent Defendants did not
11 know of the objectively high likelihood of infringement, it was so obvious that it should have been
12 known to Defendants. In addition, on September 13, 2010, Plaintiff provided a detailed explanation
13 to Defendants of how Defendants' products infringe the '730 Patent, and thus Defendants'
14 infringement has been willful at least since that date. Alternatively, on May 15, 2015, Plaintiff
15 served its Preliminary Disclosure of Asserted Claims and Infringement Contentions in ASUS I
16 ("ASUS I PICs"). The ASUS I PICs provided a detailed explanation of how products reasonably
17 similar to the products accused of infringement here infringe the '730 Patent. Thus, Defendants'
18 infringement has been wilfull at least since May 15, 2015.

19 26. The infringement of the '730 Patent by ASUS will continue unless enjoined by this
20 Court.

21 27. The infringing activities by ASUS have caused and will continue to cause irreparable
22 injury to Avago for which there exists no adequate remedy at law.

23 **COUNT 2**
24 **(Infringement of U.S. Patent No. 5,870,087)**

25 28. Avago incorporates by reference each and every allegation in the preceding
26 paragraphs.

27 29. ASUS is making, using, offering to sell, selling and/or importing into the United
28 States products that are adapted to or capable of decoding electronic video files or video data

streams (*e.g.*, MPEG-2/H.262, MPEG-4/H.264, etc.), including but not limited to ASUS Model Nos. A4310, A43S, A52J, A52N, A53SV, A53T, A53U, A53Z, A55V, A6JA, A6KM, A6M, A6T, A72JK, A73S, A75V, A7J, A7K, A7SV, A7T, A8DC, A8J, A8JA, A8N, A8SC, A8SR, A9T, ASUSPRO Advanced B43J, ASUSPRO Advanced B53J, Automobili Lamborghini Eee PC VX6, CG8270, CM1740, CM1831, CM6340, CM6431, CM6630, CP3130, D553M, Eee PC Disney MK90H, Eee Box EB1501, Eee Pad Transformer Prime (TF201), Eee Pad Transformer TF101, Eee PC 1000, Eee PC 1000H, Eee PC 1000HA, Eee PC 1000HD, Eee PC 1000HE, Eee PC 1000HG, Eee PC 1001HA (Seashell), Eee PC 1001P (Seashell), Eee PC 1001PX (Seashell), Eee PC 1001PXD, Eee PC 1002H, Eee PC 1002HA, Eee PC 1005HA (Seashell), Eee PC 1005P (Seashell), Eee PC 1005PE (Seashell), Eee PC 1005PEG, Eee PC 1005PR (Seashell), Eee PC 1008HA (Seashell), Eee PC 1011CX, Eee PC 1011PX, Eee PC 1015B, Eee PC 1015BX, Eee PC 1015CX, Eee PC 1015P (Seashell), Eee PC 1015PE (Seashell), Eee PC 1015PED, Eee PC 1015PEM, Eee PC 1015PN, Eee PC 1015PW, Eee PC 1015PX, Eee PC 1015T, Eee PC 1016P, Eee PC 1016PT, Eee PC 1018P, Eee PC 1025C, Eee PC 1025CE, Eee PC 1201HA (Seashell), Eee PC 1201N (Seashell), Eee PC 1201PN (Seashell), Eee PC 1215B, Eee PC 1215BT, Eee PC 1215N, Eee PC 1215P, Eee PC 1215T, Eee PC 1225B, Eee PC 1225C, Eee PC 2G Surf, Eee PC 4G, Eee PC 701, Eee PC 701SD, Eee PC 900, Eee PC 900, Eee PC 900HA, Eee PC 900HD, Eee PC 900HD, Eee PC 901, Eee PC 904HA, Eee PC 904HD, Eee PC MK90, Eee PC S101, Eee PC S101H, Eee PC T101MT, Eee PC T91MT, Eee PC X101CH, Eee PC X101CH/R11CX, Eee PC X101H, Eee Slate EP121, Eee Top ET2203, EeeBox PC B202, Eeebox PC B206, Eeebox PC EB1006, EeeBox PC EB1012P, EeeBox PC EB1012P, EeeBox PC EB1020, EeeBox PC EB1501, EeeBox PC EB1501P, EeeTop PC ET1602, EeeTop PC ET2002, EeeTop PC ET2002T, EeeTop PC ET2010AG, EeeTop PC ET2010AGT, EeeTop PC ET2010PNT, EeeTop PC ET2203, EeeTop PC ET2203T, Essentio CG1330, Essentio CG5270, Essentio CG5290, Essentio CG8350, Essentio CM1630, Essentio CM1730, Essentio CM6850, ET1611PUT, ET2011AUKB, ET2011AUTB, ET2012I, ET2020A, ET2020AUKK, ET2203T, ET2210, ET2220I, ET2221AUKR, ET2221AUTR, ET2300INTI, ET2321INTH, ET2322INTH, ET2400IGTS, ET2400INT, ET2400XVT, ET2411INKI, ET2411INTI, ET2700INKS, ET2700INTS, ET2701INKI, ET2701IUKI, F102BA, F3J, F3K,

1 F3KA, F3SA, F3SC, F3SE, F3SG, F3SV, F3T, F3U, F50SF, F50SV, F50Z, F550L, F551M,
 2 F553M, F555L, F55U, F5GL, F5R, F5RL, F5SL, F5SR, F5VL, F5Z, F6V, F6VE, F70SL, F7S,
 3 F80S, F81S, F83T, F8P, F8Sa, F8Sg, F8Sn, F8Sp, F8Sv, F8Tr, F8Va, F9Dc, F9S, F9Sg, Fonepad 7
 4 (FE170CG), Fonepad 7 (FE375CG), Fonepad 7 (ME372CG), Fonepad ME371MG, G1, G1S, G2K,
 5 G2S, G2SG, G46VW, G50V, G50Vt, G51J, G51Vx, G53Jw, G53SW, G53SX, G550J, G55VW,
 6 G56JR, G60J, G60Jx, G60Vx, G70S, G70Sg, G71G, G71GX, G71V, G72GX, G73Jh, G73Jw,
 7 G73SW, G750JH, G750JS, G750JW, G75VX, GL551JK, K30AD, K40AB, K40C, K40IN, K42JC,
 8 K42JK, K42Jr, K42N, K43SA, K43SV, K43U, K45VD, K45VM, K46CM, K50AB, K50AD,
 9 K50AF, K50ID, K50IN, K52DR, K52JC, K52JE, K52JR, K52JT, K52N, K53SC, K53SD, K53T,
 10 K53U, K53Z, K550L, K555L, K55D, K55N, K55VJ, K55VM, K56CM, K61IC, K70AB, K70AC,
 11 K70IC, K70IO, K72D, K72JK, K73B, K73SD, K75D, K75V, L3000 series, L50VN, Lamborghini
 12 VX1, Lamborghini VX3 (VX Series), Lamborghini VX5, M2000 series, M50S, M50Vc, M50Vm,
 13 M51SE, M51SN, M51SR, M51TA, M51VA, M5200, M60J, M60VP, M70SA, M70VM, N46VB,
 14 N50Vc, N51Tp, N52D, N53T, N541LA, N550LF, N551JK, N55SL, N56D, N70S, N71Ja, N73SM,
 15 N750J, N80VB, N90S, Portable AiO PT2001, PRO5DI, PT2002, Q302LA, Q400A, Q500A,
 16 Q550LF, Q551L, R051BX, R1F, R500N, R501V, R503U, R505C, R510CA, R510DP, R700V,
 17 R751J, ROG CG8480, ROG CG8565, ROG TYTAN G30AB, S46C, S56C, Transformer Book
 18 TX300C, Transformer Pad TF103CX, U30J, U30S, U31J, U31S, U32U, U33J, U35J, U36J, U36S,
 19 U38D, U3S, U41J, U43J, U45J, U46S, U47VC, U50V, U53J, U6S, U6V, U80V, UL30J, UL30V,
 20 UL50V, UL80J, UL80V, UX50V, UX30S, UX51VZ, V1J, V1S, V2JE, VivoBook S550CM,
 21 VivoBook S551LB, VivoBook V551L, W2J, W2P, W7J, W7S, W7SG, W90VP, X301A, X401A,
 22 X401U, X43U, X450VC, X501A, X501U, X51R, X51RL, X52J, X52N, X53S, X53U, X53Z,
 23 X550DP, X550EA, X550J, X550LB, X550LD, X550VL, X552L, X553M, X55U, X59GL, X59SR,
 24 X71SL, X71V, X72D, X73S, X751L, X75V, X83V, Z71V, Z81, Z9000, Z94L-2B, C100PA, C201,
 25 ET2040INK, ET2322INKH, G11CD, G750JY, G752VL, G752VT, G752VY, GL771, P2420LJ,
 26 P2420SJ, P2520LJ, P2520SJ, Q552, ROG GR6, UX303LB, VivoPC VM62N, VivoTab RT,
 27 X550JK, Z170C, Z300C, Z380CX, Z580C, Z580CA, Zenbook UX21E, and ZenBook UX51V, that
 28 infringe at least Claim 1 of the '087 Patent.

1 30. Upon information and belief, the accused products, including but not limited to those
2 identified in the preceding paragraph, include an MPEG decoder system that includes a single
3 memory for use by transport, decode, and system controller functions. Upon information and
4 belief, the system includes a channel receiver for receiving an MPEG encoded stream; transport
5 logic coupled to the channel receiver which demultiplexes one or more multimedia data streams
6 from the encoded stream; a system controller coupled to the transport logic which controls
7 operations within the MPEG decoder system; an MPEG decoder coupled to receive one or more
8 multimedia data streams output from the transport logic, wherein the MPEG decoder operates to
9 perform MPEG decoding on the multimedia data streams. On information and belief, a memory is
10 coupled to the MPEG decoder, the memory is used by the MPEG decoder during MPEG decoding
11 operations, the memory stores code and data useable by the system controller which enables the
12 system controller to perform control functions within the MPEG decoder system, and the memory is
13 used by the transport logic for demultiplexing operations. On information and belief, the MPEG
14 decoder is operable to access the memory during MPEG decoding operations; the transport logic is
15 operable to access the memory to store and retrieve data during demultiplexing operations; and the
16 system controller is operable to access the memory to retrieve code and data during system control
17 functions.

18 31. Upon information and belief, ASUS had actual knowledge of the '087 Patent at least
19 as early as September 13, 2010, and at least since that date has had actual knowledge that one or
20 more of its products infringes one or more claims of the '087 Patent.

21 32. On information and belief, Defendants have induced and will continue to induce the
22 infringement of at least one claim of the '087 patent, in violation of 35 U.S.C. § 271(b), by, among
23 other things, actively and knowingly aiding and abetting others (including Defendants' customers
24 and end users) through activities such as marketing ASUS products, creating and/or distributing
25 data sheets, application notes, and/or similar materials with instructions on using ASUS products,
26 with the specific intent to induce others to directly make, use, offer for sale, sell, and/or import into
27 the United States, without license or authority from Plaintiff, ASUS products that fall within the
28 scope of the '087 patent. On information and belief, Defendants know that the induced acts

1 constitute infringement of the '087 patent.

2 33. On information and belief, Defendants' past and continuing infringement has been
 3 deliberate and willful, and this case is therefore an exceptional case, which warrants an award of
 4 treble damages and attorneys' fees to Plaintiffs pursuant to 35 U.S.C. § 285. On information and
 5 belief, Defendants have known that their products practice one or more claims of the '087 Patent
 6 since September 13, 2010, at the latest. On information and belief, Defendants have continued to
 7 make, use, sell, offer for sale, and/or import infringing products into the United States despite
 8 knowing that there was an objectively high likelihood of infringement of the '087 Patent. To the
 9 extent Defendants did not know of the objectively high likelihood of infringement, it was so
 10 obvious that it should have been known to Defendants. In addition, on May 15, 2015, Plaintiff
 11 served the ASUS I PICs. The ASUS I PICs provided a detailed explanation of how products
 12 reasonably similar to the products accused of infringement here infringe the '087 Patent. Thus,
 13 Defendants' infringement has been wilfull at least since May 15, 2015.

14 34. The infringement of the '087 Patent by ASUS will continue unless enjoined by this
 15 Court.

16 35. The infringing activities by ASUS have caused and will continue to cause irreparable
 17 injury to Avago for which there exists no adequate remedy at law.

18
 19 **COUNT 3**
(Infringement of U.S. Patent No. 6,188,835)

20 36. Avago incorporates by reference each and every allegation in the preceding
 21 paragraphs.

22 37. ASUS is making, using, offering to sell, selling and/or importing into the United
 23 States products adapted to or capable of reading data from an optical disc (such as a DVD or Blu-
 24 ray disc) and creating and storing user-defined bookmarks for a particular DVD or Blu-ray disc in a
 25 non-volatile memory, including without limitation optical disk drives, including but not limited to
 26 ASUS Model Nos. A7Sv, A8Sc, Essentio CG5275, Essentio CM5570, Essentio CM5675, F3Sc,
 27 F3Sv, G1S, G2K, G2S, G2Sg, G71Gx, M50Sv, M51Sn, M51Sr, M70Sa, M70Vm, and N80Vn, that
 28 infringe at least Claim 8 of the '835 Patent.

1 38. Upon information and belief, the accused products, including but not limited to those
2 identified in the preceding paragraph, contain a disk drive that retrieves from an optical disk
3 identification data (such as the disk title, which identifies the optical disk), encoded video data (such
4 as MPEG-2 encoded audio and video information, *i.e.*, a presentation such as a movie or television
5 program) and navigation data (such as timecodes and chapter starts). Upon information and belief,
6 these accused devices include an input device configured to produce an output signal in response to
7 user input. Upon information and belief, these accused devices include software that allows a user
8 to create bookmarks using the output signal from the input device. Bookmarks indicate a beginning
9 of a selected portion of the presentation, namely, the portion of the presentation that occurs after the
10 bookmark. Upon information and belief, these accused products include a hard disk, which is a
11 non-volatile memory for storage of identification data and navigation data. Upon information and
12 belief, these accused products also include a CPU (a microprocessor) coupled to receive the
13 identification data and the navigation data from the disk drive. The CPU also receives the output
14 signal from the input device. The CPU is coupled to the hard disk. Upon information and belief,
15 the CPU is configured to respond to the input device driven bookmarking process by producing the
16 current navigation data of the presentation being received by the CPU from the optical disk drive.
17 Upon information and belief, the CPU is configured to do this in response to the input device's
18 output signal and the CPU produces timecodes that are stored in bookmarks. Upon information and
19 belief, during playback of a presentation, the user may use the input device to create a bookmark.
20 In doing so, the output signal of the input device indicates the beginning of the user selected portion
21 of the presentation currently being played, as the user selected portion is a portion of the
22 presentation subsequent to the bookmark. The CPU responds to the output signal by producing the
23 current timecode (navigation data), which identifies the beginning of the user selected portion of the
24 presentation currently being played, and storing the identification data and the current navigation
25 data in the hard disk. The identification data and the current navigation data exist concurrently in
26 the hard disk and are associated with each other.

27 39. Upon information and belief, ASUS had actual knowledge of the '835 Patent at least
28 as early as August 4, 2010, and at least since that date has had actual knowledge that one or more of

1 its products infringes one or more claims of the '835 Patent.

2 40. On information and belief, Defendants have induced and will continue to induce the
3 infringement of at least one claim of the '835 patent, in violation of 35 U.S.C. § 271(b), by, among
4 other things, actively and knowingly aiding and abetting others (including Defendants' customers
5 and end users) through activities such as marketing ASUS products, creating and/or distributing
6 data sheets, application notes, and/or similar materials with instructions on using ASUS products,
7 with the specific intent to induce others to directly make, use, offer for sale, sell, and/or import into
8 the United States, without license or authority from Plaintiff, ASUS products that fall within the
9 scope of the '835 patent. On information and belief, Defendants know that the induced acts
10 constitute infringement of the '835 patent.

11 41. On information and belief, Defendants' past and continuing infringement has been
12 deliberate and willful, and this case is therefore an exceptional case, which warrants an award of
13 treble damages and attorneys' fees to Plaintiffs pursuant to 35 U.S.C. § 285. On information and
14 belief, Defendants have known that their products practice one or more claims of the '835 Patent
15 since August 4, 2010, at the latest. Defendants have continued to make, use, sell, offer for sale,
16 and/or import infringing products into the United States despite knowing that there was an
17 objectively high likelihood of infringement of the '835 Patent. To the extent Defendants did not
18 know of the objectively high likelihood of infringement, it was so obvious that it should have been
19 known to Defendants. In addition, on January 21, 2011, Plaintiff provided a detailed explanation to
20 Defendants of how Defendants' products infringe the '835 Patent, and thus Defendants'
21 infringement has been willful at least since that date. Alternatively, on May 15, 2015, Plaintiff
22 served the ASUS I PICs. The ASUS I PICs provided a detailed explanation of how products
23 reasonably similar to the products accused of infringement here infringe the '835 Patent. Thus,
24 Defendants' infringement has been wilfull at least since May 15, 2015.

25 42. The infringement of the '835 Patent by ASUS will continue unless enjoined by this
26 Court.

27 43. The infringing activities by ASUS have caused and will continue to cause irreparable
28 injury to Avago for which there exists no adequate remedy at law.

COUNT 4
(Infringement of U.S. Patent No. 6,430,148)

44. Avago incorporates by reference each and every allegation in the preceding paragraphs.

45. ASUS is making, using, offering to sell, selling and/or importing into the United States products, systems, software, and/or methods, in whole or in part, that complies with, is compatible with, and/or implements any part of any version of the IEEE 802.11 standard, including without limitations Clause 18 (titled “Orthogonal frequency division multiplexing (OFDM) PHY specification”), including but not limited to ASUS Model Nos. 1015E, A4310, A43S, A45A, A52F, A52J, A52N, A53E, A53SV, A53T, A53U, A53Z, A54C, A550C, A55A, A55V, A6F, A6JA, A6KM, A6M, A6T, A72F, A72JK, A73E, A73S, A75V, A7J, A7K, A7SV, A7T, A8DC, A8J, A8JA, A8N, A8SC, A8SR, A9T, ASUSPRO Advanced B33E, ASUSPRO Advanced B43E, ASUSPRO Advanced B43F, ASUSPRO Advanced B43J, ASUSPRO Advanced B53E, ASUSPRO Advanced B53F, ASUSPRO Advanced B53J, ASUSPRO Essential PU500C, ASUSPRO P550C, Automobili Lamborghini Eee PC VX6, B50A, CP3130, D550CA, D553M, Eee PC Disney MK90H, Eee Box EB1501, Eee Pad Transformer Prime (TF201), Eee Pad Transformer TF101, Eee PC 1000, Eee PC 1000H, Eee PC 1000HA, Eee PC 1000HD, Eee PC 1000HE, Eee PC 1000HG, Eee PC 1001HA (Seashell), Eee PC 1001HAG, Eee PC 1001P (Seashell), Eee PC 1001PX (Seashell), Eee PC 1001PXD, Eee PC 1002H, Eee PC 1002HA, Eee PC 1005 HAG (Seashell), Eee PC 1005HA (Seashell), Eee PC 1005HR, Eee PC 1005P (Seashell), Eee PC 1005PE (Seashell), Eee PC 1005PEG, Eee PC 1005PR (Seashell), Eee PC 1005PXD, Eee PC 1008HA (Seashell), Eee PC 1008P (Seashell Karim Rashid Collection), Eee PC 1011CX, Eee PC 1011PX, Eee PC 1015B, Eee PC 1015BX, Eee PC 1015CX, Eee PC 1015P (Seashell), Eee PC 1015PE (Seashell), Eee PC 1015PED, Eee PC 1015PEM, Eee PC 1015PN, Eee PC 1015PW, Eee PC 1015PX, Eee PC 1015T, Eee PC 1016P, Eee PC 1016PT, Eee PC 1016PT, Eee PC 1018P, Eee PC 1025C, Eee PC 1025CE, Eee PC 1101HA (Seashell), Eee PC 1201HA (Seashell), Eee PC 1201N (Seashell), Eee PC 1201PN (Seashell), Eee PC 1215B, Eee PC 1215BT, Eee PC 1215N, Eee PC 1215P, Eee PC 1215T, Eee PC 1225B, Eee PC 1225C, Eee PC 2G Surf, Eee PC 4G, Eee PC 701, Eee PC 701SD, Eee PC 900, Eee

1 PC 900, Eee PC 900A, Eee PC 900HA, Eee PC 900HD, Eee PC 900HD, Eee PC 901, Eee PC
 2 904HA, Eee PC 904HD, Eee PC MK90, Eee PC R101D, Eee PC S101, Eee PC S101H, Eee PC
 3 T101MT, Eee PC T91, Eee PC T91MT, Eee PC X101CH, Eee PC X101CH/R11CX, Eee PC
 4 X101H, Eee Slate EP121, Eee Top ET2203, EeeBox PC B202, Eeebox PC B206, Eeebox PC
 5 EB1006, EeeBox PC EB1012P, EeeBox PC EB1012P, EeeBox PC EB1020, EeeBox PC EB1035,
 6 EeeBox PC EB1501, EeeBox PC EB1501P, EeeTop PC ET1602, EeeTop PC ET1602C, EeeTop
 7 PC ET1610PT, EeeTop PC ET2002, EeeTop PC ET2002T, EeeTop PC ET2010AG, EeeTop PC
 8 ET2010AGT, EeeTop PC ET2010PNT, EeeTop PC ET2203, EeeTop PC ET2203T, Essentio
 9 CG5270, Essentio CM5570, ET1010IUKI, ET1611PUT, ET1612IUTS, ET1620IUTT,
 10 ET2011AUKB, ET2011AUTB, ET2011ET, ET2012EUKS, ET2012EUTS, ET2012I,
 11 ET20131IUK, ET2013I, ET2013IUTI, ET2020A, ET2020AUKK, ET2020IUTI, ET2040IUK,
 12 ET2203T, ET2210, ET2220I, ET2220IUKI, ET2220IUTI, ET2221AUKR, ET2221AUTR,
 13 ET2230IUT, ET2232IUK, ET2300INTI, ET2300IUTI, ET2311IUTH, ET2321INTH,
 14 ET2321IUTH, ET2322IUKH, ET2323IUT, ET2400IGTS, ET2400INT, ET2400IT, ET2400IUTS,
 15 ET2400XVT, ET2410EUTS, ET2410IUTS, ET2411INKI, ET2411INTI, ET2411IUTI,
 16 ET2700INKS, ET2700INTS, ET2700IUKS, ET2700IUTS, ET2701INKI, ET2701ITUI,
 17 ET2701IUKI, F102BA, F3E, F3F, F3J, F3K, F3KA, F3SA, F3SC, F3SE, F3SV, F3T, F3U, F502C,
 18 F50SF, F50SV, F50Z, F52Q, F550L, F551C, F551M, F553M, F555L, F55A, F55C, F55U, F5GL,
 19 F5R, F5RL, F5SL, F5SR, F5VL, F5Z, F6V, F6VE, F70SL, F75A, F7F, F7S, F80Q, F82Q, F83T,
 20 F8Tr, F8Va, F9Dc, F9S, Flip R554LA, Fonepad 7 (FE170CG), Fonepad 7 (FE375CG), Fonepad 7
 21 (ME372CG), Fonepad ME371MG, G1, G1S, G2K, G2S, G2SG, G46VW, G50V, G51J, G51Vx,
 22 G53Jw, G53SW, G53SX, G550J, G55VW, G56JR, G60J, G60Jx, G60Vx, G71G, G71GX, G72GX,
 23 G73Jh, G73Jw, G73SW, G750JH, G750JS, G750JW, G75VX, GL551JK, K30AD, K40AB, K40C,
 24 K40IJ, K40IN, K42F, K42JC, K42JK, K42Jr, K42N, K43E, K43SA, K43SV, K43U, K45A,
 25 K45VD, K45VM, K46CM, K50AB, K50AD, K50AF, K50ID, K50IJ, K50IN, K52DR, K52F,
 26 K52JC, K52JE, K52JR, K52JT, K52N, K53E, K53SC, K53SD, K53T, K53U, K53Z, K550L,
 27 K555L, K55A, K55D, K55N, K55VJ, K55VM, K56CA, K56CM, K60IJ, K61IC, K70AB, K70AC,
 28 K70IC, K70IJ, K70IO, K72D, K72F, K72JK, K73B, K73E, K73SD, K751M, K75D, K75V, K84L,

1 L3000 series, L50VN, Lamborghini VX3 (VX Series), M2000 series, M50S, M50Vc, M51E,
 2 M51SE, M51TA, M5200, M60J, M60VP, N10J, N20A, N43J, N43S, N46VB, N50Vc, N51Tp,
 3 N51Vf, N52D, N53Jn, N53SN, N53T, N541LA, N550LF, N551JK, N55SL, N56D, N56JR, N56VJ,
 4 N56VM, N61Jq, N61Jv, N61Vg, N70S, N71Ja, N71Jv, N71Vg, N73Jf, N73SM, N750J, N76VJ,
 5 N76VM, N76VZ, N80VB, N80Vc, N81Vg, N82Jv, N90S, Nova Lite PX20, Nova P20, Nova P22,
 6 NX90Jq, P42F, P50IJ, P52F, Portable AiO PT2001, PRO5DI, PT2002, Q200E, Q302LA, Q400A,
 7 Q500A, Q501L, Q502LA, Q550LF, Q551L, R051BX, R1E, R1F, R2E, R2H, R500A, R500N,
 8 R500V, R501V, R503A, R503C, R503U, R505C, R50A, R510CA, R510DP, R510L, R556L,
 9 R700V, R704A, R751J, ROG CG8480, ROG CG8565, ROG TYTAN G30AB, S121, S405C, S46C,
 10 S56C, S6F, TAICHI 21, TAICHI 31, Transformer Book Flip TP550L, Transformer Book H100TA,
 11 Transformer Book T300L, Transformer Book Trio TX201L, Transformer Book TX300C,
 12 Transformer Book TX300CA, Transformer Pad TF0310C, Transformer Pad TF103CX, U1F, U24E,
 13 U2E Bamboo, U30J, U30S, U31F, U31J, U31S, U32U, U33J, U35F, U35J, U36J, U36S, U38D,
 14 U3S, U41J, U43F, U43J, U45J, U46E, U46S, U47A, U47VC, U50A, U50F, U52F, U53F, U53J,
 15 U56E, U57A, U6E, U6S, U6V, U80A, U81A, UL20FT, UL30J, UL80J, UX50V, UX30, UX30S,
 16 UX51VZ, V1J, V1S, V2JE, V301L, V500C, Vivobook F200CA, VivoBook Q301L, VivoBook
 17 S200E, VivoBook S300C, VivoBook S301LA, VivoBook S400C, VivoBook S451L, VivoBook
 18 S550CM, VivoBook S551LB, VivoBook V400C, VivoBook V451L, VivoBook V551L, VivoBook
 19 X202E, W2J, W2P, W5F, W7J, W7S, W7SG, W90VP, X200CA, X200LA, X200M, X201E,
 20 X301A, X401A, X401U, X43E, X43U, X44H, X44L, X450C, X450VC, X45A, X45U, X501A,
 21 X501U, X502CA, X51L, X51R, X51RL, X52F, X52J, X52N, X53E, X53S, X53U, X53Z, X54C,
 22 X54H, X54L, X550C, X550DP, X550EA, X550J, X550LB, X550LD, X550VL, X551CA, X552L,
 23 X553M, X55A, X55C, X55U, X59GL, X59SR, X71Q, X71SL, X71V, X72D, X72F, X73E, X73S,
 24 X750L, X751L, X755JA, X75A, X75V, X83V, Z33, Z54C, Z71V, Z81, Z9000, Z94L-2B,
 25 BU400A, C100PA, C201, ET2020IUKI, ET2031IUK, ET2040INK, ET2322INKH, ET2324IUT,
 26 ET2325IUK, ET2701IUTI, G750JY, G752VL, G752VT, G752VY, GL771, P2420LA, P2420LJ,
 27 P2420SA, P2420SJ, P2520LA, P2520LJ, P2520SJ, Q552, ROG GR6, TP200SA, UX303LB,
 28 UX303UA, VivoPC VM42, VivoPC VM62, VivoPC VM62B, VivoPC VM62N, VivoTab RT,

1 X550JK, Z170C, Z300C, Z380CX, Z580C, Z580CA, Zenbook UX21A, Zenbook UX21E, Zenbook
2 UX302L, Zenbook UX31E, and Zenbook UX31L, that infringe at least Claim 8 of the '148 Patent.

3 46. Upon information and belief, the accused products, including but not limited to those
4 identified in the preceding paragraph, are compatible with at least versions b, g, n, and ac of the
5 IEEE 802.11 Standard. As 802.11-compatible products, each of these accused products is an
6 apparatus for use in an OFDM communication system. Upon information and belief, these accused
7 products comprise a first OFDM device for communicating with a second OFDM device at a
8 remote station. Upon information and belief, these accused products are configured to add a pilot
9 signal to a plurality of data signals, generate a plurality of sub-carrier signals by modulating the
10 pilot signals and data signals, and generate a plurality of sub-carrier frequency signals by
11 performing an inverse fast Fourier transformation on the sub-carrier signals for transmission to the
12 remote station.

13 47. Upon information and belief, ASUS had actual knowledge of the '148 Patent at least
14 as early as February 20, 2015, and at least since that date has had actual knowledge that one or more
15 of its products infringes one or more claims of the '148 Patent.

16 48. On information and belief, Defendants have induced and will continue to induce the
17 infringement of at least one claim of the '148 patent, in violation of 35 U.S.C. § 271(b), by, among
18 other things, actively and knowingly aiding and abetting others (including Defendants' customers
19 and end users) through activities such as marketing ASUS products, creating and/or distributing
20 data sheets, application notes, and/or similar materials with instructions on using ASUS products,
21 with the specific intent to induce others to directly make, use, offer for sale, sell, and/or import into
22 the United States, without license or authority from Plaintiff, ASUS products that fall within the
23 scope of the '148 patent. On information and belief, Defendants know that the induced acts
24 constitute infringement of the '148 patent.

25 49. On information and belief, Defendants' past and continuing infringement has been
26 deliberate and willful, and this case is therefore an exceptional case, which warrants an award of
27 treble damages and attorneys' fees to Plaintiffs pursuant to 35 U.S.C. § 285. On information and
28 belief, Defendants have known that their products practice one or more claims of the '148 Patent

1 since February 20, 2015, at the latest. Defendants have continued to make, use, sell, offer for sale,
 2 and/or import infringing products into the United States despite knowing that there was an
 3 objectively high likelihood of infringement of the '148 Patent. To the extent Defendants did not
 4 know of the objectively high likelihood of infringement, it was so obvious that it should have been
 5 known to Defendants. Further, on May 15, 2015, Plaintiff served the ASUS I PICs. The ASUS I
 6 PICs provided a detailed explanation of how products reasonably similar to the products accused of
 7 infringement here infringe the '148 Patent. Thus, Defendants' infringement has been wilfull at least
 8 since May 15, 2015.

9 50. The infringement of the '148 Patent by ASUS will continue unless enjoined by this
 10 Court.

11 51. The infringing activities by ASUS have caused and will continue to cause irreparable
 12 injury to Avago for which there exists no adequate remedy at law.

13 **COUNT 5**
 14 **(Infringement of U.S. Patent No. 6,982,663)**

15 52. Avago incorporates by reference each and every allegation in the preceding
 16 paragraphs.

17 53. ASUS is making, using, offering to sell, selling and/or importing into the United
 18 States products adapted to or capable of encoding or decoding electronic video files or video data
 19 streams containing UEG(k) syntax elements compliant with the H.264 Standard, including but not
 20 limited to ASUS Model Nos. A4310, A43S, A52J, A52N, A53SV, A53T, A53U, A53Z, A55V,
 21 A6JA, A6KM, A6M, A6T, A72JK, A73S, A75V, A7J, A7K, A7SV, A7T, A8DC, A8J, A8JA,
 22 A8N, A8SC, A8SR, A9T, ASUSPRO Advanced B43J, ASUSPRO Advanced B53J, Automobili
 23 Lamborghini Eee PC VX6, CG8270, CM1740, CM1831, CM6340, CM6431, CM6630, CP3130,
 24 D553M, Eec PC Disney MK90H, Eee Box EB1501, Eee Pad Transformer Prime (TF201), Eee Pad
 25 Transformer TF101, Eee PC 1000, Eee PC 1000H, Eee PC 1000HA, Eee PC 1000HD, Eee PC
 26 1000HE, Eee PC 1000HG, Eee PC 1001HA (Seashell), Eee PC 1001P (Seashell), Eee PC 1001PX
 27 (Seashell), Eee PC 1001PXD, Eee PC 1002H, Eee PC 1002HA, Eee PC 1005HA (Seashell), Eee
 28 PC 1005P (Seashell), Eee PC 1005PE (Seashell), Eee PC 1005PEG, Eee PC 1005PR (Seashell),

1 Eee PC 1008HA (Seashell), Eee PC 1011CX, Eee PC 1011PX, Eee PC 1015B, Eee PC 1015BX,
 2 Eee PC 1015CX, Eee PC 1015P (Seashell), Eee PC 1015PE (Seashell), Eee PC 1015PED, Eee PC
 3 1015PEM, Eee PC 1015PN, Eee PC 1015PW, Eee PC 1015PX, Eee PC 1015T, Eee PC 1016P,
 4 Eee PC 1016PT, Eee PC 1018P, Eee PC 1025C, Eee PC 1025CE, Eee PC 1201HA (Seashell), Eee
 5 PC 1201N (Seashell), Eee PC 1201PN (Seashell), Eee PC 1215B, Eee PC 1215BT, Eee PC 1215N,
 6 Eee PC 1215P, Eee PC 1215T, Eee PC 1225B, Eee PC 1225C, Eee PC 2G Surf, Eee PC 4G, Eee
 7 PC 701, Eee PC 701SD, Eee PC 900, Eee PC 900, Eee PC 900HA, Eee PC 900HD, Eee PC 900HD,
 8 Eee PC 901, Eee PC 904HA, Eee PC 904HD, Eee PC MK90, Eee PC S101, Eee PC S101H, Eee PC
 9 T101MT, Eee PC T91MT, Eee PC X101CH, Eee PC X101CH/R11CX, Eee PC X101H, Eee Slate
 10 EP121, Eee Top ET2203, EeeBox PC B202, Eeebox PC B206, Eeebox PC EB1006, EeeBox PC
 11 EB1012P, EeeBox PC EB1012P, EeeBox PC EB1020, EeeBox PC EB1501, EeeBox PC EB1501P,
 12 EeeTop PC ET1602, EeeTop PC ET2002, EeeTop PC ET2002T, EeeTop PC ET2010AG, EeeTop
 13 PC ET2010AGT, EeeTop PC ET2010PNT, EeeTop PC ET2203, EeeTop PC ET2203T, Essentio
 14 CG1330, Essentio CG5270, Essentio CG5290, Essentio CG8350, Essentio CM1630, Essentio
 15 CM1730, Essentio CM6850, ET1611PUT, ET2011AUKB, ET2011AUTB, ET2012I, ET2020A,
 16 ET2020AUKK, ET2203T, ET2210, ET2220I, ET2221AUKR, ET2221AUTR, ET2300INTI,
 17 ET2321INTH, ET2322INTH, ET2400IGTS, ET2400INT, ET2400XVT, ET2411INKI,
 18 ET2411INTI, ET2700INKS, ET2700INTS, ET2701INKI, ET2701IUKI, F102BA, F3J, F3K,
 19 F3KA, F3SA, F3SC, F3SE, F3SG, F3SV, F3T, F3U, F50SF, F50SV, F50Z, F550L, F551M,
 20 F553M, F555L, F55U, F5GL, F5R, F5RL, F5SL, F5SR, F5VL, F5Z, F6V, F6VE, F70SL, F7S,
 21 F80S, F81S, F83T, F8P, F8Sa, F8Sg, F8Sn, F8Sp, F8Sv, F8Tr, F8Va, F9Dc, F9S, F9Sg, Fonepad 7
 22 (FE170CG), Fonepad 7 (FE375CG), Fonepad 7 (ME372CG), Fonepad ME371MG, G1, G1S, G2K,
 23 G2S, G2SG, G46VW, G50V, G50Vt, G51J, G51Vx, G53Jw, G53SW, G53SX, G550J, G55VW,
 24 G56JR, G60J, G60Jx, G60Vx, G70S, G70Sg, G71G, G71GX, G71V, G72GX, G73Jh, G73Jw,
 25 G73SW, G750JH, G750JS, G750JW, G75VX, GL551JK, K30AD, K40AB, K40C, K40IN, K42JC,
 26 K42JK, K42Jr, K42N, K43SA, K43SV, K43U, K45VD, K45VM, K46CM, K50AB, K50AD,
 27 K50AF, K50ID, K50IN, K52DR, K52JC, K52JE, K52JR, K52JT, K52N, K53SC, K53SD, K53T,
 28 K53U, K53Z, K550L, K555L, K55D, K55N, K55VJ, K55VM, K56CM, K61IC, K70AB, K70AC,

1 K70IC, K70IO, K72D, K72JK, K73B, K73SD, K75D, K75V, L3000 series, L50VN, Lamborghini
 2 VX1, Lamborghini VX3 (VX Series), Lamborghini VX5, M2000 series, M50S, M50Vc, M50Vm,
 3 M51SE, M51SN, M51SR, M51TA, M51VA, M5200, M60J, M60VP, M70SA, M70VM, N46VB,
 4 N50Vc, N51Tp, N52D, N53T, N541LA, N550LF, N551JK, N55SL, N56D, N70S, N71Ja, N73SM,
 5 N750J, N80VB, N90S, Portable AiO PT2001, PRO5DI, PT2002, Q302LA, Q400A, Q500A,
 6 Q550LF, Q551L, R051BX, R1F, R500N, R501V, R503U, R505C, R510CA, R510DP, R700V,
 7 R751J, ROG CG8480, ROG CG8565, ROG TYTAN G30AB, S46C, S56C, Transformer Book
 8 TX300C, Transformer Pad TF103CX, U30J, U30S, U31J, U31S, U32U, U33J, U35J, U36J, U36S,
 9 U38D, U3S, U41J, U43J, U45J, U46S, U47VC, U50V, U53J, U6S, U6V, U80V, UL30J, UL30V,
 10 UL50V, UL80J, UL80V, UX50V, UX30S, UX51VZ, V1J, V1S, V2JE, VivoBook S550CM,
 11 VivoBook S551LB, VivoBook V551L, W2J, W2P, W7J, W7S, W7SG, W90VP, X301A, X401A,
 12 X401U, X43U, X450VC, X501A, X501U, X51R, X51RL, X52J, X52N, X53S, X53U, X53Z,
 13 X550DP, X550EA, X550J, X550LB, X550LD, X550VL, X552L, X553M, X55U, X59GL, X59SR,
 14 X71SL, X71V, X72D, X73S, X751L, X75V, X83V, Z71V, Z81, Z9000, Z94L-2B, C100PA, C201,
 15 ET2040INK, ET2322INKH, G11CD, G750JY, G752VL, G752VT, G752VY, GL771, P2420LJ,
 16 P2420SJ, P2520LJ, P2520SJ, Q552, ROG GR6, UX303LB, VivoPC VM62N, VivoTab RT,
 17 X550JK, Z170C, Z300C, Z380CX, Z580C, Z580CA, Zenbook UX21E, and ZenBook UX51V, that
 18 infringe at least Claim 11 of the '663 Patent.

19 54. Upon information and belief, the accused products, including but not limited to those
 20 identified in the preceding paragraph, include a graphics processing unit that includes decoder
 21 circuitry that is configured to generate and decode UEG(k) encoded syntax elements, or
 22 “codewords,” as described in the H.264 Standard. Upon information and belief, the accused
 23 products accomplish this via circuitry that sets the index value to a threshold in response to a first
 24 portion of the decoder-generated codeword having a first pattern; adds an offset to the index value
 25 based on a second pattern in a second portion of the codeword following the first portion in
 26 response to the first portion having the first pattern; and adds a value to the index value based on a
 27 third pattern in a third portion of the codeword following the second portion in response to the first
 28 portion having the first pattern.

59. Avago incorporates by reference each and every allegation in the preceding paragraphs.

60. At least until March 10, 2015, ASUS was making, using, offering to sell, selling and/or importing into the United States products adapted to or capable of encoding electronic video files or video data streams containing UEG(k) syntax elements compliant with the H.264 Standard, including but not limited to ASUS Model Nos. A4310, A43S, A52J, A52N, A53SV, A53T, A53U, A53Z, A55V, A6JA, A6KM, A6M, A6T, A72JK, A73S, A75V, A7J, A7K, A7SV, A7T, A8DC, A8J, A8JA, A8N, A8SC, A8SR, A9T, ASUSPRO Advanced B43J, ASUSPRO Advanced B53J, Automobili Lamborghini Eee PC VX6, CG8270, CM1740, CM1831, CM6340, CM6431, CM6630, CP3130, D553M, Eec PC Disney MK90H, Eee Box EB1501, Eee Pad Transformer Prime (TF201), Eee Pad Transformer TF101, Eee PC 1000, Eee PC 1000H, Eee PC 1000HA, Eee PC 1000HD, Eee PC 1000HE, Eee PC 1000HG, Eee PC 1001HA (Seashell), Eee PC 1001P (Seashell), Eee PC 1001PX (Seashell), Eee PC 1001PXD, Eee PC 1002H, Eee PC 1002HA, Eee PC 1005HA (Seashell), Eee PC 1005P (Seashell), Eee PC 1005PE (Seashell), Eee PC 1005PEG, Eee PC 1005PR (Seashell), Eee PC 1008HA (Seashell), Eee PC 1011CX, Eee PC 1011PX, Eee PC 1015B, Eee PC 1015BX, Eee PC 1015CX, Eee PC 1015P (Seashell), Eee PC 1015PE (Seashell), Eee PC 1015PED, Eee PC 1015PEM, Eee PC 1015PN, Eee PC 1015PW, Eee PC 1015PX, Eee PC 1015T, Eee PC 1016P, EEE PC 1016PT, Eee PC 1018P, Eee PC 1025C, Eee PC 1025CE, Eee PC 1201HA (Seashell), Eee PC 1201N (Seashell), Eee PC 1201PN (Seashell), Eee PC 1215B, Eee PC 1215BT, Eee PC 1215N, Eee PC 1215P, Eee PC 1215T, Eee PC 1225B, Eee PC 1225C, Eee PC 2G Surf, Eee PC 4G, Eee PC 701, Eee PC 701SD, Eee PC 900, Eee PC 900, Eee PC 900HA, Eee PC 900HD, Eee PC 900HD, Eee PC 901, Eee PC 904HA, Eee PC 904HD, Eee PC MK90, Eee PC S101, Eee PC S101H, Eee PC T101MT, Eee PC T91MT, Eee PC X101CH, Eee PC X101CH/R11CX, Eee PC X101H, Eee Slate EP121, Eee Top ET2203, EeeBox PC B202, Eeebox PC B206, Eeebox PC EB1006, EeeBox PC EB1012P, EeeBox PC EB1012P, EeeBox PC EB1020, EeeBox PC EB1501, EeeBox PC EB1501P, EeeTop PC ET1602, EeeTop PC ET2002, EeeTop PC ET2002T, EeeTop PC ET2010AG, EeeTop PC ET2010AGT, EeeTop PC ET2010PNT, EeeTop PC ET2203, EeeTop PC ET2203T, Essentio CG1330, Essentio CG5270, Essentio CG5290, Essentio CG8350, Essentio

1 CM1630, Essentio CM1730, Essentio CM6850, ET1611PUT, ET2011AUKB, ET2011AUTB,
 2 ET2012I, ET2020A, ET2020AUKK, ET2203T, ET2210, ET2220I, ET2221AUKR, ET2221AUTR,
 3 ET2300INTI, ET2321INTH, ET2322INTH, ET2400IGTS, ET2400INT, ET2400XVT,
 4 ET2411INKI, ET2411INTI, ET2700INKS, ET2700INTS, ET2701INKI, ET2701IUKI, F102BA,
 5 F3J, F3K, F3KA, F3SA, F3SC, F3SE, F3SG, F3SV, F3T, F3U, F50SF, F50SV, F50Z, F550L,
 6 F551M, F553M, F555L, F55U, F5GL, F5R, F5RL, F5SL, F5SR, F5VL, F5Z, F6V, F6VE, F70SL,
 7 F7S, F80S, F81S, F83T, F8P, F8Sa, F8Sg, F8Sn, F8Sp, F8Sv, F8Tr, F8Va, F9Dc, F9S, F9Sg,
 8 Fonepad 7 (FE170CG), Fonepad 7 (FE375CG), Fonepad 7 (ME372CG), Fonepad ME371MG, G1,
 9 G1S, G2K, G2S, G2SG, G46VW, G50V, G50Vt, G51J, G51Vx, G53Jw, G53SW, G53SX, G550J,
 10 G55VW, G56JR, G60J, G60Jx, G60Vx, G70S, G70Sg, G71G, G71GX, G71V, G72GX, G73Jh,
 11 G73Jw, G73SW, G750JH, G750JS, G750JW, G75VX, GL551JK, K30AD, K40AB, K40C, K40IN,
 12 K42JC, K42JK, K42Jr, K42N, K43SA, K43SV, K43U, K45VD, K45VM, K46CM, K50AB,
 13 K50AD, K50AF, K50ID, K50IN, K52DR, K52JC, K52JE, K52JR, K52JT, K52N, K53SC, K53SD,
 14 K53T, K53U, K53Z, K550L, K555L, K55D, K55N, K55VJ, K55VM, K56CM, K61IC, K70AB,
 15 K70AC, K70IC, K70IO, K72D, K72JK, K73B, K73SD, K75D, K75V, L3000 series, L50VN,
 16 Lamborghini VX1, Lamborghini VX3 (VX Series), Lamborghini VX5, M2000 series, M50S,
 17 M50Vc, M50Vm, M51SE, M51SN, M51SR, M51TA, M51VA, M5200, M60J, M60VP, M70SA,
 18 M70VM, N46VB, N50Vc, N51Tp, N52D, N53T, N541LA, N550LF, N551JK, N55SL, N56D,
 19 N70S, N71Ja, N73SM, N750J, N80VB, N90S, Portable AiO PT2001, PRO5DI, PT2002, Q302LA,
 20 Q400A, Q500A, Q550LF, Q551L, R051BX, R1F, R500N, R501V, R503U, R505C, R510CA,
 21 R510DP, R700V, R751J, ROG CG8480, ROG CG8565, ROG TYTAN G30AB, S46C, S56C,
 22 Transformer Book TX300C, Transformer Pad TF103CX, U30J, U30S, U31J, U31S, U32U, U33J,
 23 U35J, U36J, U36S, U38D, U3S, U41J, U43J, U45J, U46S, U47VC, U50V, U53J, U6S, U6V,
 24 U80V, UL30J, UL30V, UL50V, UL80J, UL80V, UX50V, UX30S, UX51VZ, V1J, V1S, V2JE,
 25 VivoBook S550CM, VivoBook S551LB, VivoBook V551L, W2J, W2P, W7J, W7S, W7SG,
 26 W90VP, X301A, X401A, X401U, X43U, X450VC, X501A, X501U, X51R, X51RL, X52J, X52N,
 27 X53S, X53U, X53Z, X550DP, X550EA, X550J, X550LB, X550LD, X550VL, X552L, X553M,
 28 X55U, X59GL, X59SR, X71SL, X71V, X72D, X73S, X751L, X75V, X83V, Z71V, Z81, Z9000,

1 Z94L-2B, C100PA, C201, ET2040INK, ET2322INKH, G11CD, G750JY, G752VL, G752VT,
2 G752VY, GL771, P2420LJ, P2420SJ, P2520LJ, P2520SJ, Q552, ROG GR6, UX303LB, VivoPC
3 VM62N, VivoTab RT, X550JK, Z170C, Z300C, Z380CX, Z580C, Z580CA, Zenbook UX21E, and
4 ZenBook UX51V, that infringe at least Claim 3 of the original '387 Patent.

5 61. Upon information and belief, the accused products, including but not limited to those
6 identified in the preceding paragraph, include a graphics processing unit that includes an encoder
7 that performs UEG(k) encoding of syntax elements or "index values" as described in the H.264
8 Standard. Upon information and belief, this encoder accomplishes this by determining if a
9 particular index value is less than a threshold value and, if so, the decoder constructs a codeword
10 using a unary binarization; otherwise, the encoder constructs a codeword in a way that includes
11 using exp-Golomb binarization.

12 62. Upon information and belief, ASUS had actual knowledge of the original '387 Patent
13 at least as early as September 13, 2010, and at least since that date has had actual knowledge that
14 one or more of its products infringes one or more claims of the original '387 Patent.

15 63. On information and belief, Defendants have induced the infringement of at least one
16 claim of the original '387 patent, in violation of 35 U.S.C. § 271(b), by, among other things,
17 actively and knowingly aiding and abetting others (including Defendants' customers and end users)
18 through activities such as marketing ASUS products, creating and/or distributing data sheets,
19 application notes, and/or similar materials with instructions on using ASUS products, with the
20 specific intent to induce others to directly make, use, offer for sale, sell, and/or import into the
21 United States, without license or authority from Plaintiff, ASUS products that fall within the scope
22 of the original '387 patent. On information and belief, Defendants knew that the induced acts
23 constitute infringement of the original '387 patent.

24 64. On information and belief, Defendants' past and continuing infringement has been
25 deliberate and willful, and this case is therefore an exceptional case, which warrants an award of
26 treble damages and attorneys' fees to Plaintiffs pursuant to 35 U.S.C. § 285. On information and
27 belief, Defendants have known that their products practice one or more claims of the original '387
28 Patent since September 13, 2010, at the latest. Defendants have continued to make, use, sell, offer

1 for sale, and/or import infringing products into the United States despite knowing that there was an
 2 objectively high likelihood of infringement of the original '387 Patent. To the extent Defendants
 3 did not know of the objectively high likelihood of infringement, it was so obvious that it should
 4 have been known to Defendants. In addition, on May 15, 2015, Plaintiff served the ASUS I PICs.
 5 The ASUS I PICs provided a detailed explanation of how products reasonably similar to the
 6 products accused of infringement here infringe the original '387 Patent. Thus, Defendants'
 7 infringement has been wilfull at least since May 15, 2015.

8 65. The infringing activities by ASUS have caused irreparable injury to Avago for
 9 which there exists no adequate remedy at law.

10 **COUNT 7**
 11 **(Infringement of Corrected U.S. Patent No. 6,744,387)**

12 66. Avago incorporates by reference each and every allegation in the preceding
 13 paragraphs.

14 67. Since March 10, 2015, ASUS has been making, using, offering to sell, selling and/or
 15 importing into the United States products adapted to or capable of encoding electronic video files or
 16 video data streams containing UEG(k) syntax elements compliant with the H.264 Standard, including
 17 but not limited to ASUS Model Nos. A4310, A43S, A52J, A52N, A53SV, A53T, A53U, A53Z,
 18 A55V, A6JA, A6KM, A6M, A6T, A72JK, A73S, A75V, A7J, A7K, A7SV, A7T, A8DC, A8J,
 19 A8JA, A8N, A8SC, A8SR, A9T, ASUSPRO Advanced B43J, ASUSPRO Advanced B53J,
 20 Automobili Lamborghini Eee PC VX6, CG8270, CM1740, CM1831, CM6340, CM6431, CM6630,
 21 CP3130, D553M, Eec PC Disney MK90H, Eee Box EB1501, Eee Pad Transformer Prime (TF201),
 22 Eee Pad Transformer TF101, Eee PC 1000, Eee PC 1000H, Eee PC 1000HA, Eee PC 1000HD, Eee
 23 PC 1000HE, Eee PC 1000HG, Eee PC 1001HA (Seashell), Eee PC 1001P (Seashell), Eee PC
 24 1001PX (Seashell), Eee PC 1001PXD, Eee PC 1002H, Eee PC 1002HA, Eee PC 1005HA
 25 (Seashell), Eee PC 1005P (Seashell), Eee PC 1005PE (Seashell), Eee PC 1005PEG, Eee PC
 26 1005PR (Seashell), Eee PC 1008HA (Seashell), Eee PC 1011CX, Eee PC 1011PX, Eee PC 1015B,
 27 Eee PC 1015BX, Eee PC 1015CX, Eee PC 1015P (Seashell), Eee PC 1015PE (Seashell), Eee PC
 28 1015PED, Eee PC 1015PEM, Eee PC 1015PN, Eee PC 1015PW, Eee PC 1015PX, Eee PC 1015T,

1 Eee PC 1016P, Eee PC 1016PT, Eee PC 1018P, Eee PC 1025C, Eee PC 1025CE, Eee PC 1201HA
 2 (Seashell), Eee PC 1201N (Seashell), Eee PC 1201PN (Seashell), Eee PC 1215B, Eee PC 1215BT,
 3 Eee PC 1215N, Eee PC 1215P, Eee PC 1215T, Eee PC 1225B, Eee PC 1225C, Eee PC 2G Surf,
 4 Eee PC 4G, Eee PC 701, Eee PC 701SD, Eee PC 900, Eee PC 900, Eee PC 900HA, Eee PC 900HD,
 5 Eee PC 900HD, Eee PC 901, Eee PC 904HA, Eee PC 904HD, Eee PC MK90, Eee PC S101, Eee
 6 PC S101H, Eee PC T101MT, Eee PC T91MT, Eee PC X101CH, Eee PC X101CH/R11CX, Eee PC
 7 X101H, Eee Slate EP121, Eee Top ET2203, EeeBox PC B202, Eeebox PC B206, Eeebox PC
 8 EB1006, EeeBox PC EB1012P, EeeBox PC EB1012P, EeeBox PC EB1020, EeeBox PC EB1501,
 9 EeeBox PC EB1501P, EeeTop PC ET1602, EeeTop PC ET2002, EeeTop PC ET2002T, EeeTop PC
 10 ET2010AG, EeeTop PC ET2010AGT, EeeTop PC ET2010PNT, EeeTop PC ET2203, EeeTop PC
 11 ET2203T, Essentio CG1330, Essentio CG5270, Essentio CG5290, Essentio CG8350, Essentio
 12 CM1630, Essentio CM1730, Essentio CM6850, ET1611PUT, ET2011AUKB, ET2011AUTB,
 13 ET2012I, ET2020A, ET2020AUKK, ET2203T, ET2210, ET2220I, ET2221AUKR, ET2221AUTR,
 14 ET2300INTI, ET2321INTH, ET2322INTH, ET2400IGTS, ET2400INT, ET2400XVT,
 15 ET2411INKI, ET2411INTI, ET2700INKS, ET2700INTS, ET2701INKI, ET2701IUKI, F102BA,
 16 F3J, F3K, F3KA, F3SA, F3SC, F3SE, F3SG, F3SV, F3T, F3U, F50SF, F50SV, F50Z, F550L,
 17 F551M, F553M, F555L, F55U, F5GL, F5R, F5RL, F5SL, F5SR, F5VL, F5Z, F6V, F6VE, F70SL,
 18 F7S, F80S, F81S, F83T, F8P, F8Sa, F8Sg, F8Sn, F8Sp, F8Sv, F8Tr, F8Va, F9Dc, F9S, F9Sg,
 19 Fonepad 7 (FE170CG), Fonepad 7 (FE375CG), Fonepad 7 (ME372CG), Fonepad ME371MG, G1,
 20 G1S, G2K, G2S, G2SG, G46VW, G50V, G50Vt, G51J, G51Vx, G53Jw, G53SW, G53SX, G550J,
 21 G55VW, G56JR, G60J, G60Jx, G60Vx, G70S, G70Sg, G71G, G71GX, G71V, G72GX, G73Jh,
 22 G73Jw, G73SW, G750JH, G750JS, G750JW, G75VX, GL551JK, K30AD, K40AB, K40C, K40IN,
 23 K42JC, K42JK, K42Jr, K42N, K43SA, K43SV, K43U, K45VD, K45VM, K46CM, K50AB,
 24 K50AD, K50AF, K50ID, K50IN, K52DR, K52JC, K52JE, K52JR, K52JT, K52N, K53SC, K53SD,
 25 K53T, K53U, K53Z, K550L, K555L, K55D, K55N, K55VJ, K55VM, K56CM, K61IC, K70AB,
 26 K70AC, K70IC, K70IO, K72D, K72JK, K73B, K73SD, K75D, K75V, L3000 series, L50VN,
 27 Lamborghini VX1, Lamborghini VX3 (VX Series), Lamborghini VX5, M2000 series, M50S,
 28 M50Vc, M50Vm, M51SE, M51SN, M51SR, M51TA, M51VA, M5200, M60J, M60VP, M70SA,

1 M70VM, N46VB, N50Vc, N51Tp, N52D, N53T, N541LA, N550LF, N551JK, N55SL, N56D,
 2 N70S, N71Ja, N73SM, N750J, N80VB, N90S, Portable AiO PT2001, PRO5DI, PT2002, Q302LA,
 3 Q400A, Q500A, Q550LF, Q551L, R051BX, R1F, R500N, R501V, R503U, R505C, R510CA,
 4 R510DP, R700V, R751J, ROG CG8480, ROG CG8565, ROG TYTAN G30AB, S46C, S56C,
 5 Transformer Book TX300C, Transformer Pad TF103CX, U30J, U30S, U31J, U31S, U32U, U33J,
 6 U35J, U36J, U36S, U38D, U3S, U41J, U43J, U45J, U46S, U47VC, U50V, U53J, U6S, U6V,
 7 U80V, UL30J, UL30V, UL50V, UL80J, UL80V, UX50V, UX30S, UX51VZ, V1J, V1S, V2JE,
 8 VivoBook S550CM, VivoBook S551LB, VivoBook V551L, W2J, W2P, W7J, W7S, W7SG,
 9 W90VP, X301A, X401A, X401U, X43U, X450VC, X501A, X501U, X51R, X51RL, X52J, X52N,
 10 X53S, X53U, X53Z, X550DP, X550EA, X550J, X550LB, X550LD, X550VL, X552L, X553M,
 11 X55U, X59GL, X59SR, X71SL, X71V, X72D, X73S, X751L, X75V, X83V, Z71V, Z81, Z9000,
 12 Z94L-2B, C100PA, C201, ET2040INK, ET2322INKH, G11CD, G750JY, G752VL, G752VT,
 13 G752VY, GL771, P2420LJ, P2420SJ, P2520LJ, P2520SJ, Q552, ROG GR6, UX303LB, VivoPC
 14 VM62N, VivoTab RT, X550JK, Z170C, Z300C, Z380CX, Z580C, Z580CA, Zenbook UX21E, and
 15 ZenBook UX51V, that infringe at least Claim 3 of the corrected '387 Patent.

16 68. Upon information and belief, the accused products, including but not limited to those
 17 identified in the preceding paragraph, include a graphics processing unit that includes an encoder
 18 that performs UEG(k) encoding of syntax elements or “index values” as described in the H.264
 19 Standard. Upon information and belief, this encoder accomplishes this by determining if a
 20 particular index value is less than a threshold value and, if so, the decoder constructs a codeword
 21 using a unary binarization; otherwise, the encoder constructs a codeword in a way that includes
 22 using exp-Golomb binarization.

23 69. Upon information and belief, ASUS had actual knowledge of the corrected '387
 24 Patent at least as early as March 10, 2015, and at least since that date has had actual knowledge that
 25 one or more of its products infringes one or more claims of the corrected '387 Patent.

26 70. On information and belief, Defendants have induced and will continue to induce the
 27 infringement of at least one claim of the corrected '387 patent, in violation of 35 U.S.C. § 271(b),
 28 by, among other things, actively and knowingly aiding and abetting others (including Defendants'

customers and end users) through activities such as marketing ASUS products, creating and/or distributing data sheets, application notes, and/or similar materials with instructions on using ASUS products, with the specific intent to induce others to directly make, use, offer for sale, sell, and/or import into the United States, without license or authority from Plaintiff, ASUS products that fall within the scope of the corrected '387 patent. On information and belief, Defendants know that the induced acts constitute infringement of the corrected '387 patent.

71. On information and belief, Defendants' past and continuing infringement has been deliberate and willful, and this case is therefore an exceptional case, which warrants an award of treble damages and attorneys' fees to Plaintiffs pursuant to 35 U.S.C. § 285. On information and belief, Defendants have known that their products practice one or more claims of the corrected '387 Patent since March 10, 2015, at the latest. Defendants have continued to make, use, sell, offer for sale, and/or import infringing products into the United States despite knowing that there was an objectively high likelihood of infringement of the corrected '387 Patent. To the extent Defendants did not know of the objectively high likelihood of infringement, it was so obvious that it should have been known to Defendants. In addition, on May 15, 2015, Plaintiff served the ASUS I PICs. The ASUS I PICs provided a detailed explanation of how products reasonably similar to the products accused of infringement here infringe the corrected '387 Patent. Thus, Defendants' infringement has been wilfull at least since May 15, 2015.

72. The infringing activities by ASUS have caused and will continue to cause irreparable injury to Avago for which there exists no adequate remedy at law.

COUNT 8
(Infringement of U.S. Patent No. 5,982,830)

73. Avago incorporates by reference each and every allegation in the preceding paragraphs.

74. ASUS is making, using, offering to sell, selling and/or importing into the United States products adapted to or capable of decoding electronic audio files or audio data streams (e.g., MPEG-2, Layer III, etc.), including but not limited to ASUS Model Nos. 1015E, A4310, A43S, A45A, A52F, A52J, A52N, A53E, A53SV, A53T, A53U, A53Z, A54C, A550C, A55A, A55V,

1 A6F, A6JA, A6KM, A6M, A6T, A72F, A72JK, A73E, A73S, A75V, A7J, A7K, A7SV, A7T,
 2 A8DC, A8J, A8JA, A8N, A8SC, A8SR, A9T, ASUSPRO Advanced B33E, ASUSPRO Advanced
 3 B43E, ASUSPRO Advanced B43F, ASUSPRO Advanced B43J, ASUSPRO Advanced B53E,
 4 ASUSPRO Advanced B53F, ASUSPRO Advanced B53J, ASUSPRO Essential PU500C,
 5 ASUSPRO P550C, Automobili Lamborghini Eee PC VX6, B50A, B80A, CG8270, CM1740,
 6 CM1831, CM6340, CM6431, CP3130, D550CA, D553M, Eec PC Disney MK90H, Eee Box
 7 EB1501, Eee Pad Transformer Prime (TF201), Eee Pad Transformer TF101, Eee PC 1000, Eee PC
 8 1000H, Eee PC 1000HA, Eee PC 1000HD, Eee PC 1000HE, Eee PC 1000HG, Eee PC 1001HA
 9 (Seashell), Eee PC 1001HAG, Eee PC 1001P (Seashell), Eee PC 1001PX (Seashell), Eee PC
 10 1001PXD, Eee PC 1002H, Eee PC 1002HA, Eee PC 1005 HAG (Seashell), Eee PC 1005HA
 11 (Seashell), Eee PC 1005HR, Eee PC 1005P (Seashell), Eee PC 1005PE (Seashell), Eee PC
 12 1005PEG, Eee PC 1005PR (Seashell), Eee PC 1005PXD, Eee PC 1008HA (Seashell), Eee PC
 13 1008P (Seashell Karim Rashid Collection), Eee PC 1011CX, Eee PC 1011PX, Eee PC 1015B, Eee
 14 PC 1015BX, Eee PC 1015CX, Eee PC 1015P (Seashell), Eee PC 1015PE (Seashell), Eee PC
 15 1015PED, Eee PC 1015PEM, Eee PC 1015PN, Eee PC 1015PW, Eee PC 1015PX, Eee PC 1015T,
 16 Eee PC 1016P, Eee PC 1016PT, EEE PC 1016PT, Eee PC 1018P, Eee PC 1025C, Eee PC 1025CE,
 17 Eee PC 1101HA (Seashell), Eee PC 1201HA (Seashell), Eee PC 1201N (Seashell), Eee PC 1201PN
 18 (Seashell), Eee PC 1215B, Eee PC 1215BT, Eee PC 1215N, Eee PC 1215P, Eee PC 1215T, Eee PC
 19 1225B, Eee PC 1225C, Eee PC 2G Surf, Eee PC 4G, Eee PC 701, Eee PC 701SD, Eee PC 900, Eee
 20 PC 900, Eee PC 900A, Eee PC 900HA, Eee PC 900HD, Eee PC 900HD, Eee PC 901, Eee PC
 21 904HA, Eee PC 904HD, Eee PC MK90, Eee PC R101D, Eee PC S101, Eee PC S101H, Eee PC
 22 T101MT, Eee PC T91, Eee PC T91MT, Eee PC X101CH, Eee PC X101CH/R11CX, Eee PC
 23 X101H, Eee Slate EP121, Eee Top ET2203, EeeBox PC EB1012P, EeeBox PC EB1012P, EeeBox
 24 PC EB1020, EeeBox PC EB1035, EeeBox PC EB1501, EeeBox PC EB1501P, EeeTop PC ET1602,
 25 EeeTop PC ET1602C, EeeTop PC ET1610PT, EeeTop PC ET2002, EeeTop PC ET2002T, EeeTop
 26 PC ET2010AG, EeeTop PC ET2010AGT, EeeTop PC ET2010PNT, EeeTop PC ET2203, EeeTop
 27 PC ET2203T, Essentio CG5270, Essentio CG5275, Essentio CG5290, Essentio CG8350, Essentio
 28 CM1630, Essentio CM1730, Essentio CM5570, Essentio CM5671, Essentio CM5675, Essentio

1 CM6850, Essentio CS5111, ET1010IUKI, ET1611PUT, ET1612IUTS, ET1620IUTT,
 2 ET2011AUKB, ET2011AUTB, ET2011ET, ET2012EUKS, ET2012EUTS, ET2012I,
 3 ET20131IUK, ET2013I, ET2013IUTI, ET2020A, ET2020AUKK, ET2020IUTI, ET2040IUK,
 4 ET2203T, ET2210, ET2220I, ET2220IUKI, ET2220IUTI, ET2221AUKR, ET2221AUTR,
 5 ET2230IUT, ET2232IUK, ET2300INTI, ET2300IUTI, ET2311IUTH, ET2321INTH,
 6 ET2321IUTH, ET2322INTH, ET2322IUKH, ET2323IUT, ET2400IGTS, ET2400INT, ET2400IT,
 7 ET2400IUTS, ET2400XVT, ET2410EUTS, ET2410IUTS, ET2411INKI, ET2411INTI,
 8 ET2411IUTI, ET2700INKS, ET2700INTS, ET2700IUKS, ET2700IUTS, ET2701INKI,
 9 ET2701ITUI, ET2701IUKI, F102BA, F3E, F3F, F3J, F3K, F3KA, F3SA, F3SC, F3SE, F3SG,
 10 F3SV, F3T, F3U, F502C, F50SF, F50SV, F50Z, F52Q, F550L, F551C, F551M, F553M, F555L,
 11 F55A, F55C, F55U, F5GL, F5SL, F5SR, F5VL, F5Z, F6A, F6V, F6VE, F70SL, F75A, F7F, F7S,
 12 F80L, F80Q, F80S, F81S, F82Q, F83T, F8P, F8Sa, F8Sg, F8Sn, F8Sp, F8Sv, F8Tr, F8Va, F9Dc,
 13 F9E, F9S, F9Sg, Flip R554LA, Fonepad 7 (FE170CG), Fonepad 7 (FE375CG), Fonepad 7
 14 (ME372CG), Fonepad ME371MG, G1, G1S, G2K, G2S, G2SG, G46VW, G50V, G50Vt, G51J,
 15 G51Vx, G53Jw, G53SW, G53SX, G550J, G55VW, G56JR, G60J, G60Jx, G60Vx, G70S, G70Sg,
 16 G71G, G71GX, G71V, G72GX, G73Jh, G73Jw, G73SW, G750JH, G750JS, G750JW, G75VX,
 17 GL551JK, K30AD, K40AB, K40C, K40IJ, K40IN, K42F, K42JC, K42JK, K42Jr, K42N, K43E,
 18 K43SA, K43SV, K43U, K45A, K45VD, K45VM, K46CM, K50AB, K50AD, K50AF, K50ID,
 19 K50IJ, K50IN, K52DR, K52F, K52JC, K52JE, K52JR, K52JT, K52N, K53E, K53SC, K53SD,
 20 K53T, K53U, K53Z, K550C, K550L, K555L, K55A, K55D, K55N, K55VJ, K55VM, K56CA,
 21 K56CM, K60IJ, K61IC, K70AB, K70AC, K70IC, K70IJ, K70IO, K72D, K72F, K72JK, K73B,
 22 K73E, K73SD, K751M, K75D, K75V, K84L, L3000 series, L50VN, Lamborghini VX1,
 23 Lamborghini VX3 (VX Series), Lamborghini VX5, M2000 series, M50S, M50Vc, M50Vm, M51E,
 24 M51SE, M51SN, M51SR, M51TA, M51VA, M5200, M60J, M60VP, M70SA, M70VM, N43J,
 25 N43S, N46VB, N50Vc, N51Tp, N51Vf, N52D, N53Jn, N53SN, N53T, N550LF, N551JK, N55SL,
 26 N56D, N56JR, N56VJ, N56VM, N61Jq, N61Jv, N61Vg, N70S, N71Ja, N71Jv, N71Vg, N73Jf,
 27 N73SM, N750J, N76VJ, N76VM, N76VZ, N80VB, N81Vg, N82Jv, N90S, Nova Lite PX20, Nova
 28 P20, Nova P22, NX90Jq, P42F, P50IJ, P52F, Portable AiO PT2001, PRO5DI, PT2002, Q200E,

1 Q302LA, Q400A, Q500A, Q501L, Q502LA, Q550LF, Q551L, R051BX, R1E, R1F, R2E, R2H,
 2 R500A, R500N, R500V, R501V, R503A, R503C, R503U, R505C, R50A, R510CA, R510DP,
 3 R510L, R556L, R700V, R704A, R751J, ROG TYTAN G30AB, S121, S405C, S46C, S56C, S6F,
 4 TAICHI 21, TAICHI 31, Transformer Book Flip TP550L, Transformer Book H100TA,
 5 Transformer Book T300L, Transformer Book Trio TX201L, Transformer Book TX300C,
 6 Transformer Book TX300CA, Transformer Pad TF0310C, Transformer Pad TF103CX, U1F,
 7 U20A, U24E, U2E Bamboo, U30J, U30S, U31F, U31J, U31S, U32U, U33J, U35F, U35J, U36J,
 8 U36S, U38D, U3S, U41J, U43F, U43J, U45J, U46E, U46S, U50A, U50F, U50V, U52F, U53F,
 9 U53J, U56E, U57A, U6E, U6S, U6V, U80A, U80V, U81A, UL20A, UL20FT, UL30A, UL30J,
 10 UL30V, UL50A, UL50AG, UL50V, UL80A, UL80J, UL80V, UX50V, UX30, UX30S, UX51VZ,
 11 V1J, V1S, V2JE, V301L, V500C, Vivobook F200CA, VivoBook Q301L, VivoBook S200E,
 12 VivoBook S300C, VivoBook S301LA, VivoBook S400C, VivoBook S451L, VivoBook S550CM,
 13 VivoBook S551LB, VivoBook V400C, VivoBook V451L, VivoBook V551L, VivoBook X202E,
 14 W2J, W2P, W5F, W7J, W7S, W7SG, W90VP, X200CA, X200LA, X200M, X201E, X301A,
 15 X401A, X401U, X43E, X43U, X44H, X44L, X450C, X450VC, X45A, X45U, X501A, X501U,
 16 X502CA, X51L, X51R, X51RL, X52F, X52J, X52N, X53E, X53S, X53U, X53Z, X54C, X54H,
 17 X54L, X550C, X550DP, X550EA, X550J, X550LB, X550LD, X550VL, X551CA, X552L,
 18 X553M, X55A, X55C, X55U, X59SR, X71Q, X71SL, X71V, X72D, X72F, X73E, X73S, X750L,
 19 X751L, X755JA, X75A, X75V, X83V, Z33, Z35F, Z54C, Z71V, Z81, Z9000, Z91E, Z94L-2B,
 20 BU400A, C100PA, C201, ET2020IUKI, ET2031IUK, ET2040INK, ET2322INKH, ET2324IUT,
 21 ET2325IUK, ET2701IUTI, G11CD, G750JY, G752VL, G752VT, G752VY, GL771, P2420LA,
 22 P2420LJ, P2420SA, P2420SJ, P2520LA, P2520LJ, P2520SJ, Q552, ROG GR6, TP200SA,
 23 UX303LB, UX303UA, VivoPC VM42, VivoPC VM62, VivoPC VM62B, VivoPC VM62N,
 24 VivoTab RT, X550JK, Z170C, Z300C, Z380CX, Z580C, Z580CA, Zenbook UX21A, Zenbook
 25 UX21E, Zenbook UX302L, Zenbook UX31E, Zenbook UX31L, and ZenBook UX51V, that
 26 infringe at least Claim 1 of the '830 Patent.

27 75. Upon information and belief, the accused products, including but not limited to those
 28 identified in the preceding paragraph, include a processor and/or software capable of or adapted to

1 decode digital audio datastreams (*e.g.*, MPEG audio, *etc.*), and is capable of or adapted to
2 synchronize a data processing unit to a bitstream having synchronization codes successively spaced
3 by a predetermined interval with data for processing disposed between the synchronization codes
4 where said bitstream has a data header comprising a bitrate and a sampling frequency. In addition,
5 upon information and belief, these accused products include a detector for detecting said
6 synchronization codes, a sensor for sensing intervals between successive synchronization codes, and
7 a comparator for comparing said intervals with said predetermined interval. Upon information and
8 belief, these accused products include a controller to determine whether the system is synchronized
9 to the bitstream after the comparator has detected a first predetermined number of said intervals,
10 and whether the system is unsynchronized to the bitstream after the comparator has detected a
11 second predetermined number of said intervals. Upon information and belief, these accused
12 products include a header sensor for sensing said data header and calculating said predetermined
13 interval from said information.

14 76. Upon information and belief, ASUS had actual knowledge of the '830 Patent at least
15 as early as August 4, 2010, and at least since that date has had actual knowledge that one or more of
16 its products infringes one or more claims of the '830 Patent.

17 77. On information and belief, Defendants have induced and will continue to induce the
18 infringement of at least one claim of the '830 patent, in violation of 35 U.S.C. § 271(b), by, among
19 other things, actively and knowingly aiding and abetting others (including Defendants' customers
20 and end users) through activities such as marketing ASUS products, creating and/or distributing
21 data sheets, application notes, and/or similar materials with instructions on using ASUS products,
22 with the specific intent to induce others to directly make, use, offer for sale, sell, and/or import into
23 the United States, without license or authority from Plaintiff, ASUS products that fall within the
24 scope of the '830 patent. On information and belief, Defendants know that the induced acts
25 constitute infringement of the '830 patent.

26 78. On information and belief, Defendants' past and continuing infringement has been
27 deliberate and willful, and this case is therefore an exceptional case, which warrants an award of
28 treble damages and attorneys' fees to Plaintiffs pursuant to 35 U.S.C. § 285. On information and

1 belief, Defendants have known that their products practice one or more claims of the '830 Patent
 2 since August 4, 2010, at the latest. On information and belief, Defendants have continued to make,
 3 use, sell, offer for sale, and/or import infringing products into the United States despite knowing
 4 that there was an objectively high likelihood of infringement of the '830 Patent. To the extent
 5 Defendants did not know of the objectively high likelihood of infringement, it was so obvious that it
 6 should have been known to Defendants. In addition, on May 15, 2015, Plaintiff served the ASUS I
 7 PICs. The ASUS I PICs provided a detailed explanation of how products reasonably similar to the
 8 products accused of infringement here infringe the '830 Patent. Thus, Defendants' infringement has
 9 been wilfull at least since May 15, 2015.

10 79. The infringement of the '830 Patent by ASUS will continue unless enjoined by this
 11 Court.

12 80. The infringing activities by ASUS have caused and will continue to cause irreparable
 13 injury to Avago for which there exists no adequate remedy at law.

14 **PRAYER FOR RELIEF**

15 WHEREFORE, Avago requests that judgment be entered in its favor and against ASUS as
 16 follows:

17 A. Entering judgment declaring that ASUS has infringed, directly and/or indirectly,
 18 literally and/or under the doctrine of equivalents, the Patents-in-Suit in violation of 35 U.S.C. § 271;

19 B. Issuing preliminary and permanent injunctions enjoining ASUS, its officers, agents,
 20 subsidiaries and employees, and those in privity or in active concert with them, from further
 21 activities that constitute infringement of U.S. Patent No. 5,670,730; U.S. Patent No. 5,870,087;
 22 U.S. Patent No. 6,188,835; U.S. Patent No. 6,430,148; and U.S. Patent No. 5,982,830, within the
 23 State of California and across the United States;

24 C. Declaring that ASUS's infringement of the Patents-in-Suit is willful and deliberate
 25 pursuant to 35 U.S.C. § 284;

26 D. Ordering that Avago be awarded damages in an amount no less than a reasonable
 27 royalty for each asserted patent arising out of ASUS's infringement of the Patents-in-Suit, together
 28 with costs, prejudgment, and post-judgment interest;

E. Declaring this an exceptional case under 35 U.S.C. § 285 and awarding attorneys' fees and trebling of damages; and

F. Awarding Avago such other costs and further relief as the Court deems just and proper.

DEMAND FOR JURY TRIAL

Pursuant to Rule 38 of the Federal Rules of Civil Procedure, Avago demands a trial by jury on all issues so triable.

DATED: January 26, 2016

Respectfully submitted,

KILPATRICK TOWNSEND & STOCKTON LLP

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